PASSION INNOVATES FUTURE

AVL DITEST

AVL DiTEST workSAFE

The AVL DiTEST workSAFE is used in the workshop to perform safety-relevant measurements on the high-voltage system of vehicles with an electric drivetrain. In particular, these measurements include verifying the absence of voltage, checking the equipotential bonding and measuring the insulation resistance.

workSAFE allows you to verify and document the de-energized condition of the vehicle quickly and reliably. This is essential in order to safely carry out service or repair work.

With workSAFE you can precisely check the equi-potential bonding, to avoid dangerous potential differences between different components of the high-voltage system. In addition, insulation faults can only be reliably detected by the insulation monitor device in case of proper equipotential bonding.

Testing the insulation resistance requires applying a test voltage that is at least equal to the battery voltage of the vehicle. workSAFE generates voltages of up to 1500 V DC and is thus prepared for future vehicle generations. You can as well measure the insulation resistance on the active high voltage system according to SAE J1766. workSAFE is also available in a version adapted to the Chinese GB 18384-2020 standard. Equipped with a pluggable 3rd measuring line, it allows you faster and more accurate measurement results regarding the insulation resistance.

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AVL DiTEST workSAFE

Workshop-optimized tool to safely measure on the high-voltage system of electrically powered and hybrid vehicles.

PRODUCT ADVANTAGES

- Future-proof with measurements up to 1500 V DC
- One tool for the most important safety-relevant measurements
- Background voltage measurement
- Self-explanatory and clear operation
- Self-check functionality
- Clear result assessment
- Automatically generated measurement protocol
- Ruggedized design for the workshop environment

POWER SUPPLY

- Powered via the USB interface
- Optional operation via a rechargeable battery and Bluetooth, for even more flexible working

EXTENSIVE MEASUREMENT FUNCTIONS

- Verify the absence of voltage
- Voltage measurement up to 1500 V DC and 1000 V AC
- Check of equipotential bonding with 4-wire measuring method (Kelvin measurement) with 200 mA (ECE R100) up to 10 A
- Insulation resistance measurement with up to 1500 V DC test voltage
- Insulation resistance measurement on the active high-voltage system up to 1500 V DC (SAE J1766 and GB 18384)
- Simulation of insulation faults
- Capacitance, inductance and resistance measurement

TECHNICAL DATA

Voltage measurement	
Voltage range	max. 1500 V DC, max. 1000 V AC
Equipotential bonding measurement	
Resolution and test current	resolution in the µΩ range; test current of 200 mA (according to UN ECE R100) up to 1 A (USB connection) or 10 A (battery operation)
Insulation resistance measurement	
On the inactive and active high voltage system	according to UN ECE R100, ISO 17409, SAE J1766, GB 18384-2020 (optional)
Measuring range and test voltage	up to 1 GΩ with test voltages up to 1500 V DC
Regulations	
Standards and Certifications	CE, EN, UL (others on request)
Protection class	IP54
Ambient Conditions	
Operation	0 to 40 °C
Transport and storage	-20 to 55 °C
Mechanic	
Dimensions (W x D x H)	250 x 400 x 150 mm
Weight	~3.5 kg
Interfaces	
USB cable	USB 3.0 Type A
Wireless Communication	Bluetooth 5.1 (Bluetooth low energy)
Measurement Ranges and Resolution	
Resistance measurement	up to 10 MΩ (resolution up to 100 mΩ)
Capacitance measurement	up to 30 mF (resolution up to 1 nF)
Inductance measurement	up to 300 mH (resolution up to 1 µH)

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